

Amendments to the Claims:

At page 15, line 1, change "Claims" to --What is claimed is:--

Cancel claims 1-24, without prejudice.

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1.-24. (cancelled)

25. (new) A plate heat exchanger comprising

a plate package, the plate package including a number of first heat exchanger plates and a number of second heat exchanger plates, the plates being permanently joined to each other and arranged beside each other so that a first plate interspace is formed between each pair of adjacent first heat exchanger plates and second heat exchanger plates, and so that a second plate interspace is formed between each pair of adjacent second heat exchanger plates and first heat exchanger plates, wherein the first plate interspaces and the second plate interspaces are separated from each other and provided beside each other in an alternating order in the plate package,

wherein substantially each heat exchanger plate has at least a first porthole and a second porthole, the first portholes forming a first inlet channel to the first plate interspaces and the second portholes forming a first outlet channel from the first plate interspaces,

wherein the plate package includes a separate space for each of the first plate interspaces, which space is closed to the second plate interspaces, and

wherein the separate space communicates with the first inlet channel via an inlet nozzle, which forms a throttling with significantly reduced flow area, and with the respective first plate interspace via an outlet nozzle, which forms a throttling with significantly reduced flow area.

26. (new) A plate heat exchanger according to claim 25, wherein the separate space is provided in the proximity of the inlet channel.

27. (new) A plate heat exchanger according to claim 25, wherein the separate space has been produced through compression-molding of the heat exchanger plates.

28. (new) A plate heat exchanger according to claim 25, wherein at least one of the nozzles is formed by a respective hole, which extends through each of the second heat exchanger plates.

29. (new) A plate heat exchanger according to claim 25, wherein the inlet nozzle is formed by a respective hole, which extends through each of the second heat exchanger plates.

30. (new) A plate heat exchanger according to claim 25, wherein the outlet nozzle is formed by a respective hole, which extends through each of said second heat exchanger plates.

31. (new) A plate heat exchanger according to claim 29, wherein the separate space is provided between a respective pair of adjacent second heat exchanger plates and first heat exchanger plates.

32. (new) A plate heat exchanger according to claim 25, wherein each of the heat exchanger plates includes a central extension plane, an upper plate plane on one side of the central extension plane and a lower plate plane on the other side of the central extension plane.

33. (new) A plate heat exchanger according to claim 32, wherein each of the second heat exchanger plates includes an upper surface area, which extends around the first porthole and which delimits the separate space, and the upper surface area is located at the level of the upper plate plane.

34. (new) A plate heat exchanger according to claim 33, wherein the hole of the outlet nozzle extends through the upper surface area.

35. (new) A plate heat exchanger according to claim 34, wherein the heat exchanger includes an end plate, which is provided adjacent to one of the second heat exchanger plates and closes the hole of the outlet nozzle of this second heat exchanger plate.

36. (new) A plate heat exchanger according to claim 33, wherein each of the second heat exchanger plates includes a lower surface area, which extends around the first porthole between the first porthole and the upper surface area, wherein the lower surface area is located at the level of the lower plate plane.

37. (new) A plate heat exchanger according to claim 36, wherein the hole of the inlet nozzle extends through the lower surface area.

38. (new) A plate heat exchanger according to claim 36, wherein each of the first heat exchanger plates includes a lower surface area, which extends around the first porthole and which delimits the separate space, and the lower surface area is located at the level of the lower plate plane.

39. (new) A plate heat exchanger according to claim 33, wherein the upper surface area of the second heat exchanger plates is located partly opposite to the lower surface area of the first heat exchanger plates for forming the separate space between these surface areas.

40. (new) A plate heat exchanger according to claim 39, wherein the inlet nozzle is located opposite to the lower surface area of the first heat exchanger plates.

41. (new) A plate heat exchanger according to claim 40, wherein the outlet nozzle, with regard to the central extension plane, is displaced in relation to the lower surface area of the first heat exchanger plates.

42. (new) A plate heat exchanger according to claim 38, wherein each of the first heat exchanger plates includes an upper surface area, which extends around the first porthole between the first porthole and the lower surface area, wherein the upper surface area is located at the level of the upper plate plane.

43. (new) A plate heat exchanger according to claim 42, wherein the lower surface area of the second heat exchanger plates is located partly opposite to the upper surface area of the first heat exchanger plates, wherein these two surface areas partly abut each other in the plate package.

44. (new) A plate heat exchanger according to claim 25, wherein the first plate interspaces form first passages for a cooling agent and the second plate interspaces form second passages for a fluid, which is adapted to be cooled by the cooling agent.

45. (new) A plate heat exchanger according to claim 25, wherein substantially each heat exchanger plate has at least a third porthole and a fourth porthole, which extend through the plate package, wherein the third portholes form a second inlet channel to the second plate interspaces and the fourth portholes form a second outlet channel from the second plate interspaces.

46. (new) A plate heat exchanger according to claim 25, wherein the heat exchanger plates in the plate package are connected to each other through brazing.

47. (new) A plate heat exchanger according to claim 25, wherein the separate space is delimited by at least one ring, which extends around the inlet channel.

48. (new) A plate heat exchanger according to claim 47, wherein each of the rings is provided in a ring groove in the adjacent heat exchanger plate.